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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,286	12/20/2001	Yoshiaki Mori	P6495a	1796

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EXAMINER

CHACKO DAVIS, DABORAH

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,286

Applicant(s)

MORI ET AL.

Examiner

Daborah Chacko-Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 23-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-17, and 19-22, are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,734,029 (Furusawa).

Furusawa, in the abstract, in col 2, lines 1-22, in col 3, lines 55-57, in col 4, lines 16-29, and lines 46-59, in col 6, lines 14-24, in col 7, lines 22-54, in col 8, lines 1-19, and in figures 3, and 4, discloses forming a mask (reference 11b) with openings (pattern of lyophilic regions and lyophobic regions, photolithographically patterned) on a substrate (workpiece surface), and applying a fine particle dispersion solution (liquid pattern material) in the openings (lyophilic regions, reference 11a), and solidifying the fine particle dispersion in the lyophilic regions to form a pattern, wherein the solidification of the fine particle dispersion solution is performed by heating, and annealing the fine particles (dried solute of the liquid pattern material). Furusawa, in col 8, lines 1-27, in col 10, lines 16-67, discloses that the pattern material supply process (formation of the first and second self organizing films in the lyophilic regions) can be performed plural times, followed by a) the drying process (heating process to remove

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excess solvent from the fine particle dispersion), b) the cleaning process (removing excess material from the lyophobic region (solid material removal process, see figures 3, and 4, references 11a, and 11b), and the removal of the lyophobic region (removal of the mask from the workpiece) from the substrate (claims 1-9, 15, and 19-22).

Furusawa, in col 9, lines 59-67, in col 10, lines 1-5, discloses the formation of the mask (reference 11b of figure 3) as a lyophobic region (hydrophobic mask) (claims 10-11).

Furusawa, in col 8, lines 1-23, discloses that the fine particle dispersion in the lyophilic region (liquid pattern material) is solidified by heat, said heating is performed to remove the solvent, and to anneal the fine particle dispersion to form a film pattern (claims 12-13). Furusawa, in col 8, lines 1-27, in col 10, lines 1-37, discloses that the lyophobic region (mask) is removed after the annealing of the fine particle dispersion, and before the coating of the second self organizing film (mask removal and annealing is performed simultaneously) (claims 14, and 16-17).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,734,029 (Furusawa) in view of U. S. Patent No. 6,585,566 (Takeda).

Furusawa is discussed in paragraph no. 2.

The difference between the claims and Furusawa is that Furusawa does not disclose that the process of removing the mask and the annealing process are performed simultaneously (claim 18).

Takeda, in col 3, lines 55-56, discloses that the resist pattern is removed by pyrolysis (fired at high temperature).

Therefore, it would be obvious to a skilled artisan to modify Furusawa by annealing and removing the resist pattern simultaneously because Takeda, in col 3, lines 56-58, discloses that employing a method of firing the resist pattern and the laminate beneath, in order to simultaneously pyrolyse the resist pattern results in a more simplified process.

Response to Arguments

5. Applicant's arguments in regards to claims 1-17, and 19-22, filed August 19, 2005, have been fully considered but they are not persuasive. The 102 rejection made over claims 1-17, and 19-22 are maintained. Applicant's arguments with respect to claim 18 have been considered but are moot in view of the new ground(s) of rejection (see paragraph no. 4).

A) Applicants argue that Furusawa does not disclose repeated applications of the material supply process that supplies the conductive trace material.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., repeated application of the material supply process that supplies conductive trace material) are not recited in the rejected claim(s). Although the claims are interpreted in

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light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In regards to performing plural times the pattern material supply process, see Furusawa, in col 7, lines 38-55, which discloses that the spray coating is sprayed at differing amounts resulting in differing layers of film thicknesses (layers of the film formed repeatedly).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dcd


November 14, 2005.



**JOHN A. MCPHERSON
PRIMARY EXAMINER**